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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,632	01/11/2002	Iver Hansen	006026.00002	8133

22907 7590 01/15/2004

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EXAMINER

MAKI, STEVEN D

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 01/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/030,632

Applicant(s)

HANSEN, IVER

Examiner

Steven D. Maki

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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1) The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

Non-initialed and/or non-dated alterations have been made to the oath or declaration. See 37 CFR 1.52(c).

Handwritten changes to the post office address were made in the declaration dated 1-10-02 but were not initialed and/or dated.

2) Since the specification fails to contain a detailed description of the invention, the following objections are made: (A) The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: None of the reference signs (e.g. 1, 13, 15, 39, 43A) shown in the figures are described in the specification. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance. (B) The disclosure is objected to because of the following informalities: The specification fails to contain a detailed description of the invention. More specifically, the specification fails to describe each of the reference numerals in the specification. Appropriate correction is required. (C) The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Incorporation of the subject matter described in claims 1-14 into the specification. In order to overcome the above objections, it is

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suggested to add a detailed description of the invention using the language of the original claims.

3) The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4) Claims 1-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As to claim 1, the subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention is the subject matter of "said leak proof means like wires ... may be easily replaced by being threaded in and out of protruding portions of the tire (15) (13)" (emphasis added) as set forth in claim 1. The original disclosure fails to teach one of ordinary skill in the art what structure and/or configuration (if any) enables the easy replacement. The original disclosure fails to provide guidance as to what constitutes "easy replacement" (in contrast to difficult replacement).

As to claim 11, the subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention is the subject matter of "said

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display may be adjusted by a regulator (10) according to tire thickness and stud protrusion." The original disclosure fails to adequately describe (and thereby fails to enable) how the regulator uses "tire thickness" (which one?) and "stud protrusion" to adjust the display which gives information about stud protrusion.

5) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6) Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, it is unclear if (1) a system of moving studs per se is being claimed or (2) a tire and a system of moving studs is being claimed. As a related matter, there is no antecedent basis for "the tire shoulders", "the tire sides" and "the tire casing". It is suggested to appropriately amend claim 1 to make it clear that a tire and a system of movable vehicle tire studs is being claimed.

In claim 1, the scope of "leak proof transmission means like metal wires for moving studs in and out of stud holes" is unclear. It is unclear for example if the above noted language, which mixes 112 sixth paragraph means plus function language and structural language, requires the transmission means to be connected to the studs such that pulling and pushing of the transmission means moves the studs.

In claim 1, the scope and meaning of "said leak proof means like wires ... may be easily replaced by being threaded in and out of protruding portions of the tire (15) (13)" is unclear. For example: It is unclear if the wires may be "easily replaced" because the

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wires, being exposed at the tire sides, may be cut and spliced. Another example, it is unclear if the above language requires structure between the wires and the studs, which permits "easy replacement".

In claim 2, it is unclear how "may" affects the scope of the claim and there is no antecedent basis for "the tire tread thickness", "the tire blocks" and "the tire shoulder blocks". Does claim 2 require a tire having a tread comprising shoulder blocks?

In claim 3, there is no antecedent basis for "said wire end in a tire stud by the tire tread" and it is unclear how "by the tread" affects the scope of the wire end. It is unclear how "preferably" affects the scope of the claim. For example, is the frustoconical or frustopyramidal tip optional whereas the thickest end is required?

In claim 5, it is unclear how "may" affects the scope of the claim. For example, it is unclear if claim 5 requires the system / tire to comprise the handle or merely the capability to be manually moved by a handle.

In claim 6, there is no antecedent basis for "the cross sectional drawing" and "the sleeve".

As to claim 7, the relationship, if any, between the stud moving source and the means like wires is unclear. Also, there is no antecedent basis for "the wheel rim" and it is unclear how "may" affects the scope of the claim.

Claim 8 is indefinite because it includes two sentences. More importantly, the scope of this claim, which describes "may" and contains antecedent basis problems such as "the dashboard" is unclear. For example: It is unclear if claim 8 requires a vehicle having switch / button on a dashboard and the tire / system of claim 1.

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In claim 9, there is no antecedent basis for "said stud moving components". It is also unclear what limitation is added by "are under normal circumstances leak proof".

In claim 13, it is unclear what limitation(s) is /are added by "said system is energized".

7) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Japan '506

8) **Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Japan '506 (JP 59-223506).**

Japan '506 discloses a tire having a tread having a "stud system" comprising "studs" (spike pins) 1 arranged in shoulders of the tire. Each stud 1 is connected to a rod 2 having a roller 3 at an end thereof. A wire 11 is arranged about the rollers 3. The wire 11 is stretched by pulling a wire 4 using a spike operating mechanism B comprising a gear roller cooperating with a rack gear 5. The stretching of the wire 11 retracts the studs 1 and thereby moves the studs so that they do not contact the ground. See figures and abstract. As can be seen from figure 1, the studs move in and out of "studs holes" (holes in the tread).

In claim 1, the claimed tire / system of movable vehicle studs is anticipated by Japan '506's tire which comprises movable spike pins. As to tire casing, figure 1 illustrates the tire as being a pneumatic tire having a casing. The claimed studs read on

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spike pins 1. As can be seen from figure 1, the studs are located in protruding shoulder portions of the tire. The claimed leak proof transmission means reads on the means for moving the studs 1 such as operating rod 2. The means for moving studs is leak proof since it is a mechanical means instead of a hydraulic means. The means for moving the studs may be easily replaced since the moving means is exposed at the side of the tire instead of being completely buried in the tire casing.

Japan '305

9) **Claims 1 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakayama (JP 6-166305).**

Nakayama discloses a tire having movable spike pins (studs) 5 in shoulder portions thereof. As indicated by figure 1, the stud is located in a block of the tread. One of ordinary skill in the art would readily understand from the illustrated cross section of the tire in figure 1, that the tire has a tire casing. Cables (leak proof transmission means like wires) 10, 11 are used to protrude and retract the studs from the tread surface. See figure 1. The cables 10, 11 are exposed on the tire sides. See figures 1 and 9. A protruding portion 25 is disposed on the side of the tire. See figure 9. The cables 10, 11 are threaded through holes in the protruding body 25.

As to claims 1 and 14, the claimed tire is anticipated by Nakayama's tire. The claimed protruding portion reads on the protruding body 25. Claim 1 does not require the protruding portion to be a shoulder protruding portion instead of a sidewall protruding portion. The cables (leak proof transmission means like wires) may be easily

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replaced since the cables are exposed at the side of the tire instead of being completely buried in the tire casing.

10) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11) **Claims 1 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakayama (JP 6-166305) in view of Japan '506 (JP 59-223506).**

Nakayama, which is discussed above, is considered to anticipate claim 1. In any event: As to claim 1, it would have been obvious to one of ordinary skill in the art to locate Nakayama's studs in protruding shoulder portions of the tire since Japan '506, which like Nakayama uses wires to move the studs, suggests locating studs in protruding shoulder portions of the tire.

As to claim 14, note the protruding body 25 on the side of the tire 1 shown in figure 9.

12) **Claims 2, 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakayama in view of Japan '506 as applied above and further in view of German '114 (DE 2103114 / cited by applicant).**

As to claim 2, it would have been obvious to tilt the studs as claimed since German '114, which like Nakayama uses wires to move studs, suggests tilting studs 2 in protruding portions of a tire. See figures 1 and 2 especially figure 1.

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The limitation of claim 4 would have been obvious since (1) Nakayama teaches locating each stud in a block of the tread and (2) Japan '506 and German '114 suggests locating studs in a protruding shoulder portion of the tread.

As to claim 5, the limitation therein (manually moving using a handle) would have been obvious since (a) Nakayama suggests using various means for moving the wires for moving the studs (see for example figures 9-12) and (b) Japan '506 suggests manually moving wires for moving studs using a spike operating mechanism B (see figure 2a).

13) Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakayama in view of Japan '506 and German '114 as applied above and further in view of Hansen '144 (WO 97/26144).

As to claim 3, it would have been obvious to provide the tilted stud with the claimed shape including the thick end since Hansen '144 suggests providing studs with a thick end so that the stud will grip like a claw especially when tilted.

14) Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakayama in view of Japan '506 as applied above and further in view of Takahashi (US 4809756).

As to claim 6, it would have been obvious to use studs and sleeves having an oval cross section in Nakayama's tire since Takahashi suggests using studs having an oval cross section to prevent the stud from rotating and thereby damaging the tread (col. 3 line 40-42); it being noted that Nakayama suggests locating the stud within a sleeve in figure 2 and 3.

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15) Claim 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakayama in view of Japan '506 as applied above and further in view of Japan '312 (JP 3-204312).

As to claim 7, it would have been obvious to provide Nakayama's tire with an electromotor as claimed since (a) Nakayama suggests using various means for moving the wires for moving the studs (see for example figures 9-12) and (b) Japan '312, which like Nakayama moves studs using wires, suggests using motors, cordlessly activated and arranged for balancing, to pull wires for moving studs for the advantage of operating the studs from in the car as the car is driven. The movement of the wires in Japan '312 correspond to the movement of the cables in figure 5 of Nakayama.

16) Claims 8-10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakayama in view of Japan '506 and Japan '312 as applied above and further in view of Hansen '463 (US 5707463).

As to claims 8-10, it would have been obvious to locate the switch for activating the stud system on a dashboard since (a) Japan '312 suggests activating the wires of a stud system using a switch (figure 14) and (b) Hansen teaches activating a motor in a stud system (albeit a hydraulic stud system) using a switch on a dashboard. As to claim 12, it would have been obvious to provide the stud system suggested by the above applied prior art with a timer since it is taken as well known / conventional to use a timer inside a car to control the operation time of a system such as a defroster; it being noted that a stud system and a defroster are used for winter conditions (an icy road and frost covered windshield respectively).

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17) **Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakayama in view of Japan '506 and Japan '312 as applied above and further in view of Hansen '144 (WO 97/26144).**

As to claim 13, it would have been obvious alternative to use a solar cell instead of a battery to energize the stud system (Japan '312 describes using a battery as the power source in the abstract) since Hansen '144 suggests powering a motor of a stud system (albeit a hydraulic stud system) using a solar cell for the self evident benefit of using a renewable power source.

Remarks


18) The remaining references are of interest.

19) No claim is allowed.

20) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310.

Steven D. Maki
January 8, 2004


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1-8-04